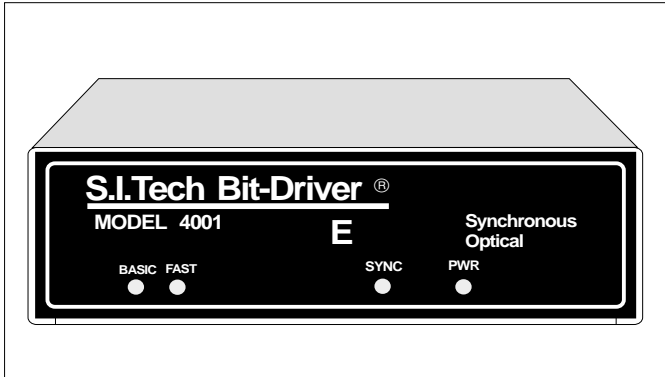


# Model 4001



## Twinax to Fiber Optic Bit - Driver<sup>®</sup> IBM Systems 3X, AS/400, & AS/400E



The S.I.Tech 4001 Bit-Driver<sup>®</sup> is designed to work with IBM 3X, AS/400, and AS/400E system using twinax cable. Model 4001 Bit-Driver is a twinax to fiber optic transmitter/receiver full duplex product implementing IBM BASIC or FAST protocol. Supports TCP/IP over Twinax.

This fiber optic Bit-Driver product eliminates many disadvantages of twinax, especially EM/RFI, ground loops (electrical isolation with fiber), high attenuation (high signal loss), limiting distance between nodes of system (5000 ft. max. twinax), and potential lightning damage outdoors between buildings.

S.I.Tech Model 4001 is a stand alone product allowing easy change from twinax or TP to fiber: Simply disconnect twinax or TP and connect to model 4001 input/output port. Model 4001 comes with power supply and status indicators showing power, data link (sync), basic or fast protocol.

- Operation Mode:** Synchronous, half/full duplex.  
1 or 2 Mbps Bi-phase data.
- Input/Output Interface:** 100 ohm twinax bulkhead jack or RJ45 (TP). IBM protocol. BASIC or FAST.
- Transmission Line Interface:** 2 ST connector fiber optic receptacles (SMA - Option)
- Transmission Distance\*:** 2 km - 6600 ft, (5 km option)
- Transmitter Output Power:** 30 microwatts into 62.5 micron fiber.
- System Wavelength:** 820 nanometers (1300nm option)
- Receive Sensitivity:** 3 microwatts at less than  $10^{-9}$  bit error rate
- Operating Temperature:** 0<sup>o</sup> C to 50<sup>o</sup> C
- Metal Enclosure:** 7.5" X 7" X 3" (19 X 17.8 X 7.6 cm).
- Weight:** 3 lbs. (1.36 kg)
- Input Power:** 110 VAC, 50/60 Hz, 10 W
- 230 Volt Version:** 4001 V

### OPERATING DISTANCE FOR FIBER OPTIC CABLE

| Fiber Size (Microns) | Attenuation dB/Km | Distance Meters* | Distance Feet* |
|----------------------|-------------------|------------------|----------------|
| 50                   | 3.0               | 2000             | 6600           |
| 62.5                 | 4.0               | 2000             | 6600           |
| 10**                 | 1.0               | 5000             | 16500          |

\* High power option available

\*\* Single mode option (While fiber can allow long distance transmission, check IBM timing restrictions)

**Optical Unit Connection:** Connect the optical transmission line to the T and R receptacles. Note which cable channel goes to T or R by noting the cable imprint. On the other end, reverse the connections.

- IBM specifications: Twinax 5000 ft. (1524 m) max; Local ports - 7 devices max; Remote ports - 4 devices max; 5751 Cluster Controller; 5251 remote terminal controller, 5294 and 5394 controllers.
- If other than twinax cable is used, impedance matching transformers (Balun) are needed.
- Some fiber types in short distance applications may overload the receiver.

UL & CSA listed. Meets FCC requirements of Class A, Part 15 Computing Devices Standard.

Specifications subject to change without notice.

Related products: 4002 and 4004

### OPTIONS

| Model No. | Options<br>XX.XXX.XX |
|-----------|----------------------|
| 1. 4001   | TW. ST. MM           |
| 2. 4001   | TP . ST. MM          |
| 3. 4001   | TW. ST. SM           |
| 4. 4001   | TP . ST. SM          |
| 5. 4001   | TW.SMA.MM            |
| 6. 4001   | TP. SMA. MM          |
| 7. 4001   | TW. SC. SM           |
| 8. 4001   | TP . SC. SM          |
| 9. 4001V  | TP. TW. ST. MM       |

TW - Twinax  
TP - Twisted Pair, RJ - 45  
ST - F. O. Connectors  
SMA - F. O. Connectors  
SC - F. O. Connectors  
MM - Multimode Fiber  
SM - Single Mode Fiber  
V - 230 VAC

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